

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1-55. (cancelled)

56. (previously presented) An apparatus for communicating, comprising:

at least one first switch module that receives at least a first oscillating signal and a first bias signal, wherein said first oscillating signal causes said at least one first switch module to gate said first bias signal and thereby generate a first periodic signal having a first plurality of harmonics;

at least one second switch module that receives at least a second oscillating signal and a second bias signal, wherein said second oscillating signal causes said at least one second switch module to gate said second bias signal and thereby generate a second periodic signal having a second plurality of harmonics;

wherein said first periodic signal and said second periodic signal are combined to thereby generate a combined periodic signal having a combined plurality of harmonics; and

at least one filter that receives said combined periodic signal, wherein said at least one filter isolates at least one harmonic of said combined plurality of harmonics.

57. (previously presented) An apparatus for communicating, comprising:

at least one first switch module that receives at least a first oscillating signal and a first bias signal, wherein said first oscillating signal causes said at least one first switch module to gate said first bias signal and thereby generate a first periodic signal having a first plurality of harmonics;

at least one second switch module that receives at least a second oscillating signal and a second bias signal, wherein said second oscillating signal causes said at least one second switch module to gate said second bias signal and thereby generate a second periodic signal having a second plurality of harmonics;

wherein said first periodic signal and said second periodic signal are combined to thereby generate a combined periodic signal having a combined plurality of harmonics; and

at least one filter that receives said combined periodic signal and removes any unwanted harmonics from said combined periodic signal to produce a filtered periodic signal having a third plurality of harmonics.

58. (amended) A transmitter, comprising:

a first switch that gates a first reference signal according to a first control signal to generate a first harmonically rich signal; and

a second switch that gates a second reference signal according to a second control signal to generate a second harmonically rich signal;

[wherein said first and second control signals are generated such that at any time only one of said first and second switches is closed; and]

wherein said first and second harmonically rich signals are combined to form a combined harmonically rich signal.

59. (previously presented) The transmitter of claim 58, further comprising:

at least one filter to isolate at least one harmonic contained in said combined harmonically rich signal.

60. (amended) A method of transmitting, comprising:

gating a first reference signal according to a first control signal to generate a first harmonically rich signal; and

gating a second reference signal according to a second control signal to generate a second harmonically rich signal;

[wherein said first and second control signals are generated such that at any time only one of said first and second reference signals is being gated; and]

wherein said first and second harmonically rich signals are combined to form a combined harmonically rich signal.

61. (previously presented) The method of claim 60, further comprising:
filtering from said combined harmonically rich signal any undesired
harmonics.

62-89. (cancelled)

90. (new) The apparatus of claim 56, wherein said first oscillating signal
represents an I information signal, and said second oscillating signal represents a Q
information signal.

91. (new) The apparatus of claim 56, further comprising a summer that sums
said first and second periodic signals.

92. (new) The apparatus of claim 57, wherein said first oscillating signal
represents an I information signal, and said second oscillating signal represents a Q
information signal.

93. (new) The apparatus of claim 57, further comprising a summer that sums
said first and second periodic signals.

94. (new) The transmitter of claim 58, wherein said first control signal
represents an I information signal, and said second control signal represents a Q
information signal.

95. (new) The apparatus of claim 58, further comprising a summer that sums
said first and second harmonically rich signals.

96. (new) The method of claim 60, wherein said first control signal
represents an I information signal, and said second control signal represents a Q
information signal.

97. (new) The method of claim 60, wherein said first and second harmonically rich signals are combined using a summer.